TECHNICAL NOTES

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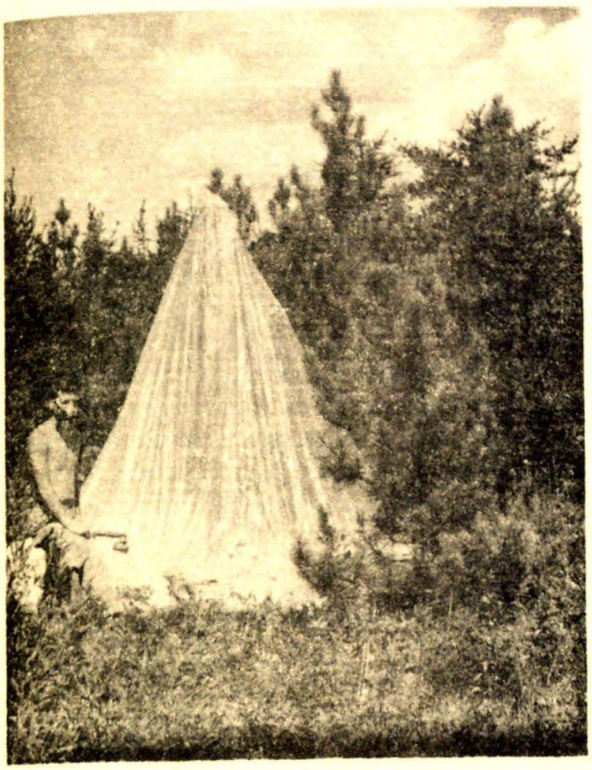
A Method for Measuring the Insect Population on Trees 6 to 12 Feet Tall

When developing plantation insect survey techniques, entomologists often want to know the accuracy of the sampling method employed. One way of checking the accuracy of a technique is by comparing the results with the total insect population in the plantation. An estimate of the total population can be obtained by counting all of the insects on representative trees and then extending the average number obtained to the rest of the trees. When an easily disturbed, fast-moving insect such as the Saratoga spittlebug is to be counted, the undisturbed population must be rapidly immobilized before an accurate count can be made. Station entomologists have devised a method of making this count on trees 6 to 12 feet tall by means of a plastic tent which can be dropped over a tree and then filled with a "quick-knockdown" insecticide.



Tent in position over tree. The operator is wearing a respirator.

The cone-shaped tent, 12 feet high and 10 feet in basal diameter, was fabricated from polyethylene plastic. The bottom of the tent is kept in proper shape with one-half inch electrical conduit stock bent into a circle. To save space during transportation and storage, this conduit base-frame is made up of three sections held together with collar joints. Pieces of strong cord attach the frame at one-foot intervals to the bottom of the tent. Ordinary brass grommets pressed into the periphery of the tent serve as points of attachment for the cord.

A small loop of plastic is attached to the top of the tent and fastened to the end of a long aluminum pole. The whole tent can thus be picked up and maneuvered with this pole.

Before the tent is dropped over the tree, a large muslin base-sheet is placed on the ground under the tree to receive the fallen insects. After the tent is in position a man with a hand-sprayer can crawl under the edge, apply the insecticide, and then shake the branches to dislodge the poisoned insects. A 0.5 to 1.0 percent pyrethrum-in-oil spray gives a rapid knockdown with no danger to the operator. However, a respirator should be used to prevent inhaling too much of the oil solvent.

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